

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-9. (cancelled)

10. (new) A series hybrid electric vehicle comprising:

- an engine;
- an n-phase generator driven by said engine;
- a rectifier generating a direct voltage from an n-phase alternating voltage received from said n-phase generator;
- a battery charged with said direct voltage;
- a motor driving a drive wheel;
- an inverter driving said motor on said direct voltage received from said rectifier and/or a direct voltage received from said battery;
- a switch,

wherein said n-phase generator includes n armature windings each having a first end connected to a common neutral point,

wherein said rectifier includes:

- a negative terminal;
- a positive terminal on which a higher potential is generated than on said negative terminal; and
- n rectifying arms,

wherein each of said n rectifying arms comprises:

- a first diode connected between said negative terminal and an intermediate node connected to second end of corresponding one of said n armature windings; and
- a second diode connected between said intermediate node and said positive terminal, and

wherein said switch is connected between said neutral point and said negative terminal.

11. (new) The series hybrid electric vehicle according to claim 10, wherein said switch electrically connects or disconnects said neutral point and said negative terminal in response to a revolution speed of said engine.

12. (new) The series hybrid electric vehicle according to claim 11, further comprising a controller controlling the engine revolution speed of said engine,

wherein, when said engine revolution speed is about to exceed a first revolution speed, said controller decreases said engine revolution speed down to a third revolution speed lower than said first revolution speed, and said switch electrically connects said neutral point and said negative terminal, and then said controller increases said engine revolution speed up to a second revolution speed higher than said first revolution speed.

13. (new) The series hybrid electric vehicle according to claim 12, wherein, when said engine revolution speed is decreased from said second revolution speed and is about to reach said first revolution speed, said controller decreases the revolution speed of said engine down to a fourth revolution speed lower than said first revolution speed, and said switch electrically disconnects said neutral point and said negative terminal, and then said controller increases said engine revolution speed up to said first revolution speed.

14. (new) The series hybrid electric vehicle according to claim 10, wherein said wheels and said motors are plurally prepared,

wherein said motors drives said drive wheels, respectively,

wherein each of said motors includes:

a rotor connected to a corresponding one of said drive wheels;

a stator having a plurality of slots circumferenced and spaced at constant intervals,

wherein said rotor comprises:

a rotor core; and

permanent magnets constituting a field magnet system,

wherein said rotor has a rotor side face facing said stator,
wherein said permanent magnets have a pole face outward in a radial direction of said rotor;

wherein a maximum value x of a distance from a point on said pole face to said rotor side face satisfies the following equation:

$$x \leq D / 10, \text{ and}$$

$$D = 2\pi r / n_1,$$

where r is a radius of said rotor core, and n_1 is a number of poles of said field magnet system.

15. (new) A series hybrid electric vehicle comprising:
an engine;
a three-phase generator driven by said engine;
a rectifier generating a direct voltage from a three-phase voltage received from said three-phase generator;
a battery charged with said direct voltage;
a motor driving a drive wheel;
an inverter driving said motor on said direct voltage received from said rectifier and/or a direct voltage received from said battery; and
a star-delta switch mechanism,
wherein said three-phase generator includes three armature windings, and
wherein said star-delta switching mechanism connects said armature windings in selected one of a star connection and a delta connection.

16. (new) The series hybrid electric vehicle according to claim 15, wherein said star-delta switch mechanism is responsive to a revolution speed of said engine for connecting said armature windings in selected one of said star connection and said delta connection.

17. (new) The series hybrid electric vehicle according to claim 16, further comprising a controller controlling the engine revolution speed of said engine,

wherein, when the revolution speed of said engine is about to exceed a first revolution speed, said controller decreases said engine revolution speed down to a third revolution speed lower than said first revolution speed, and said star-delta switch mechanism connects said armature windings in said delta connection, and then said controller increases said engine revolution speed up to a second revolution speed higher than said first revolution speed.

18. (new) The series hybrid electric vehicle according to claim 17, wherein, when said engine revolution speed is decreased from said second revolution speed and is about to reach said first revolution speed, said controller decreases the revolution speed of said engine down to a fourth revolution speed lower than said first revolution speed, and said star-delta switch mechanism connects said armature windings in said star connection, and then said controller increases said engine revolution speed up to said first revolution speed.

19. (new) The series hybrid electric vehicle according to claim 15, wherein said drive wheels and said motors are plurally prepared,

wherein said motors drives said drive wheels, respectively,

wherein each of said motors includes:

a rotor connected to a corresponding one of said drive wheels;

a stator having a plurality of slots circumferenced and spaced at constant intervals, wherein said rotor comprises:

a rotor core; and

permanent magnets constituting a field magnet system,

wherein said rotor has a rotor side face facing said stator,

wherein said permanent magnets have a pole face outward in a radial direction of said rotor;

wherein a maximum value x of a distance from a point on said pole face to said rotor side face satisfies the following equation;

$x \leq D / 10$, and

$$D = 2\pi r / n_1,$$

where r is a radius of said rotor core, and n_1 is a number of poles of said field magnet system.